South Dakota Office of Emergency Management

Severe Weather Preparedness Guide

Severe Weather Preparedness Week
April 21-25, 2008

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Why Prepare for a Disaster?

Disasters disrupt hundreds of thousands of lives every year. Each disaster has lasting effects - people are seriously injured, some are killed, and property damage runs into the billions of dollars.

Being prepared and understanding what to do can reduce fear, anxiety, and losses that accompany disasters. You should know how to respond to severe weather or any disaster that could occur in your area.

You should also be ready to be self sufficient for at least three days. This may mean providing for your own shelter, first aid, food, water, and sanitation.

Statewide Tornado Drill

A statewide tornado drill will be held Wednesday, April 23, 2008.

Test Watch
10:00 am CDT/
9:00 am MDT

Test Warning
10:15 am CDT/
9:15 am MDT

All Clear
10:30 am CDT/
9:30 MDT

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Being Prepared: What You Should Do

STEP 1: Get a Kit of Emergency Supplies

Be prepared to improvise and use what you have on hand to make it on your own for *at least* three days, maybe longer. While there are many things that might make you more comfortable, think first about fresh water, food and clean air. Consider putting together two kits. In one, put everything needed to stay where you are and make it on your own. The other should be a lightweight, smaller version you can take with you if you have to get away.

You'll need a gallon of water per person per day. Include in the kits canned and dried foods that are easy to store and prepare. If you live in a cold weather climate, include warm clothes and a sleeping bag for each member of the family.

Start now by gathering basic emergency supplies - a flashlight, a battery-powered radio, a NOAA Weather radio with tone alert, extra batteries, a first aid kit, toilet articles, prescription medicines and other special things your family may need.

STEP 2: Make a Plan for What You Will Do in an Emergency

Be prepared to assess the situation. Use common sense and whatever you have on hand to take care of yourself and your loved ones. Depending on your circumstances, the first important decision is deciding whether to stay or go. You should understand and plan for both possibilities.

Develop a Family Communications Plan: Your family may not be together when disaster strikes, so plan how you will contact one another and review what you will do in different situations. Consider a plan where each family member calls or e-mails the same friend or relative in the event of an emergency. It may be easier to make a long-distance phone call than to call across town, so an out-of-state contact may be in a better position to communicate among separated family members. You may have trouble getting through, or the phone system may be down altogether, but be patient.

Staying Put: There are circumstances when staying put, a process known as "shelter-in-place," can be a matter of survival. Quickly bring your family and pets inside. Take your emergency supplies and go into the room you have designated. Watch TV, listen to the radio or check the Internet for instructions.

Getting Away: Plan in advance how you will assemble your family and anticipate where you will go. Choose several destinations in different directions so you have options in an emergency. If you have a car, keep at least a half tank of gas in it at all times. Become familiar with alternate routes as well as other means of transportation out of your area. If you do not have a car, plan how you will leave if you have to. Take your emergency supply kit and lock the door behind you. Listen to the radio for updates.

At Work and School: Think about the places where your family spends time: school, work and other places you frequent. Talk to your children's schools and your employer about emergency plans. Find out how they will communicate with families during an emergency. If you are an employer, be sure you have an emergency preparedness plan. Review and practice it with your employees. A community working together during an emergency also makes sense. Talk to your neighbors about how you can work together.

STEP 3: Be Informed about what might happen

Ask your local emergency management office which disasters could strike your community. They will know your community's risks. You may be aware of some of them and others may surprise you. Also, ask for any information that might help you prepare and possibly reduce the risks you face.

Emergency Supply Kit

Emergency supply kits should be individually tailored to meet the basic survival needs of your family for three days to a week. Most families prefer to store their emergency supplies in one location that is relatively safe, yet easily accessible if evacuation is required. Items may be stored in a 32-gallon trash can, suitcase, duffle bag, footlocker or individual pack.

Emergency Needs

- Battery powered radio
- Water (1 gallon per person/per day)
- First aid kit and manual
- Sleeping bags and blankets
- Utility knife
- Emergency candles
- Manual can opener
- "Special needs" items for family members (infant formula, eye glasses, medications, etc.)
- Waterproof/windproof matches
- Non-perishable foods*
- Flashlight
- Extra clothing
- Whistle

Sanitation Kit

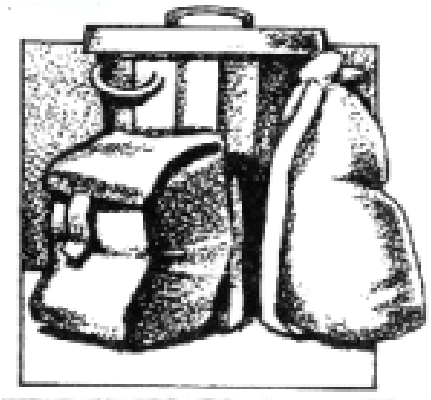
- Plastic bucket with tightly fitted lid
- Plastic trash bags and ties
- Disinfectant
- Improvised toilet seat
- Paper cups and plates
- Plastic utensils
- Personal toiletries
- Baby supplies
- Toilet paper
- Aluminum foil
- Paper towels
- Personal hygienic needs
- Soap

Other Emergency Needs

- Pen and paper
- Money
- Work gloves
- Basic tools
- Toys, books, puzzles, games
- Extra house keys and car keys
- List of contact names and phone numbers
- Hardwired phone (not cordless)

Copies of All Legal Papers

- Marriage license
- House mortgage
- Property ownership
- Automotive ownership
- Wills
- Jewelry appraisals
- Drivers licenses
- Insurance policies
- Bank accounts



Remember to change perishable supplies and water every six months.

*Suggested non-perishable food items: ready-to-eat goods in unbreakable containers, canned meats, juice, fruits & vegetables, powered milk, infant care foods, crackers, peanut butter, freeze-dried and dehydrated goods.

Floods

Floods are one of the most common hazards in the United States. Flood effects can be local, impacting a neighborhood or community, or very large, affecting entire river basins and multiple states.

However, all floods are not alike. Some floods develop slowly, sometimes over a period of days. But flash floods can develop quickly, sometimes in just a few minutes and without any visible signs of rain. Flash floods often have a dangerous wall of roaring water that carries rocks, mud, and other debris and can sweep away most things in its path. Overland flooding occurs outside a defined river or stream, such as when a levee is breached, but still can be destructive. Flooding can also occur when a dam breaks, producing effects similar to flash floods.

Be aware of flood hazards no matter where you live, but especially if you live in a low-lying area, near water or downstream from a dam. Even very small streams, gullies, creeks, culverts, dry streambeds, or low-lying ground that appear harmless in dry weather can flood. Your county emergency manager or floodplain administrator can tell you if you live in a flood-prone area.

Before a Flood

To prepare for a flood, you should:

- Avoid building in a floodplain unless you elevate and reinforce your home.
- Elevate the furnace, water heater, and electric panel if susceptible to flooding.
- Install "check valves" in sewer traps to prevent flood water from backing up into the drains of your home.
- Construct barriers (levees, beams, floodwalls) to stop floodwater from entering the building.
- Seal walls in basements with waterproofing compounds to avoid seepage.

During a Flood

If a flood is likely in your area, you should:

- Listen to the radio or television for information.
- Be aware that flash flooding can occur. If there is any possibility of a flash flood, move immediately to higher ground. Do not wait for instructions to move.
- Be aware of streams, drainage channels, canyons, and other areas known to flood suddenly. Flash floods can occur in these areas with or without such typical warnings as rain clouds or heavy rain.

If you must prepare to evacuate, you should do the following:

- Secure your home. If you have time, bring in outdoor furniture. Move essential items to an upper floor.
- Turn off utilities at the main switches or valves if instructed to do so by emergency officials. Disconnect electrical appliances. Do not touch electrical equipment if you are wet or standing in water.

If you have to leave your home, remember these evacuation tips:

- Do not walk through moving water. Six inches of moving water can make you fall. If you have to walk in water, walk where the water is not moving. Use a stick to check the firmness of the ground in front of you.
- Do not drive into flooded areas. If floodwaters rise around your car, abandon the car and move to higher ground if you can do so safely. You and the vehicle can be quickly swept away.

After a Flood

The following are guidelines for the period following a flood:

- Listen for news reports to learn whether the community's water supply is safe to drink.
- Avoid floodwaters; water may be contaminated by oil, gasoline, or raw sewage. Water may also be electrically charged from underground or downed power lines.
- Avoid moving water.
- Be aware of areas where floodwaters have receded. Roads may have weakened and could collapse under the weight of a car.
- Stay away from downed power lines, and report them to the power company.
- Return home only when authorities indicate it is safe.
- Stay out of any building if it is surrounded by floodwaters. Use extreme caution when entering buildings; there may be hidden damage, particularly in foundations.
- Service damaged septic tanks, cesspools, pits, and leaching systems as soon as possible. Damaged sewage systems are serious health hazards.
- Clean and disinfect everything that got wet. Mud left from floodwater can contain sewage and chemicals.

Thunderstorms/Lightning

All thunderstorms are dangerous. Every thunderstorm produces lightning. In the United States, an average of 300 people are injured and 80 people are killed each year by lightning. Although most lightning victims survive, people struck by lightning often report a variety of long-term, debilitating symptoms.

Dry thunderstorms that do not produce rain that reaches the ground are most prevalent in the western United States. Falling raindrops evaporate, but lightning can still reach the ground and can start wildfires.

Before Thunderstorms and Lightning
To prepare for a thunderstorm, you should do the following:

- Remove dead or rotting trees and branches that could fall and cause injury or damage during a severe thunderstorm.
- Remember the 30/30 lightning safety rule: Go indoors if, after seeing lightning, you cannot count to 30 before hearing thunder. Stay indoors for 30 minutes after hearing the last clap of thunder.

Thunderstorms
The following are guidelines for what you should do if a thunderstorm is likely in your area:

- Postpone outdoor activities.
- Get inside a home, building, or hard top automobile (not a convertible). Although you may be injured if lightning strikes your car, you are much safer inside a vehicle than outside.
- Remember, rubber-soled shoes and rubber tires provide NO protection from lightning. However, the steel frame of a hard-topped vehicle provides increased protection if you are not touching metal.
- Secure outdoor objects that could blow away or cause damage.
- Shutter windows and secure outside doors. If shutters are not available, close window blinds, shades, or curtains.
- Avoid showering or bathing. Plumbing and bathroom fixtures can conduct electricity.
- Use a corded telephone only for emergencies. Cordless and cellular telephones are safe to use.
- Unplug appliances and other electrical items such as computers and turn off air conditioners. Power surges from lightning can cause serious damage.
- Use your battery-operated NOAA Weather Radio for updates from local officials.

Avoid the following:

- Natural lightning rods such as a tall, isolated tree in an open area
- Hilltops, open fields, the beach, or a boat on the water
- Isolated sheds or other small structures in open areas
- Anything metal—tractors, farm equipment, motorcycles, golf carts, golf clubs, and bicycles

During a Thunderstorm

- If you are in a forest, seek shelter in a low area under a thick growth of small trees.
- If you are in an open area, go to a low place such as a ravine or valley. Be alert for flash floods.
- If you are in open water, get to land and find shelter immediately.
- If you are anywhere you feel your hair stand on end (which indicates that lightning is about to strike), squat low to the ground on the balls of your feet. Place your hands over your ears and your head between your knees. Make yourself the smallest target possible and minimize your contact to the ground. DO NOT lie flat on the ground.

After a Thunderstorm

- If necessary, call 9-1-1 for medical assistance as soon as possible.

The following are things you should check when you attempt to give aid to a victim of lightning:

- Breathing - if breathing has stopped, begin mouth-to-mouth resuscitation.
- Heartbeat - if the heart has stopped, administer CPR.
- Pulse - if the victim has a pulse and is breathing, look for other possible injuries. Check for burns where the lightning entered and left the body. Also be alert for nervous system damage, broken bones, and loss of hearing and eyesight.

Tornadoes

Tornadoes are nature's most violent storms. Spawned from powerful thunderstorms, tornadoes can cause fatalities and devastate a neighborhood in seconds. A tornado appears as a rotating, funnel-shaped cloud that extends from a thunderstorm to the ground with whirling winds that can reach 300 miles per hour. Damage paths can be in excess of one mile wide and 50 miles long. Every state is at some risk from this hazard. South Dakota averages 29 tornadoes per year.

Some tornadoes are clearly visible, while rain or nearby low-hanging clouds obscure others. Occasionally, tornadoes develop so rapidly that little, if any, advance warning is possible.

Before a tornado hits, the wind may die down and the air may become very still. A cloud of debris can mark the location of a tornado even if a funnel is not visible. Tornadoes generally occur near the trailing edge of a thunderstorm. It is not uncommon to see clear, sunlit skies behind a tornado.

The following are facts about tornadoes:

- They may strike quickly, with little or no warning.
- They may appear nearly transparent until dust and debris are picked up or a cloud forms in the funnel.
- The average tornado moves Southwest to Northeast, but tornadoes have been known to move in any direction.
- The average forward speed of a tornado is 30 MPH, but may vary from stationary to 70 MPH.
- Waterspouts are tornadoes that form over water.
- Tornadoes are most frequently reported east of the Rocky Mountains during spring and summer months.
- Peak tornado season in South Dakota is late spring through early summer.
- Tornadoes are most likely to occur between 3 p.m. and 9 p.m., but can occur at any time.

Before a Tornado

- Be alert to changing weather conditions.
- Listen to NOAA Weather Radio or to commercial radio or television newscasts for the latest information.
- Look for approaching storms or the following danger signs:
    - Dark, often greenish sky
    - Large hail
    - A large, dark, low-lying cloud (particularly if rotating)
    - Loud roar, similar to a freight train.

If you see approaching storms or any of the danger signs, be prepared to take shelter immediately.

During a Tornado

If you are under a tornado WARNING, seek shelter immediately! The safest place to be during a tornado is underground. Once there, try to find something sturdy you can crawl under. Getting underneath a work bench or heavy table will protect you from flying debris and/or a collapsed roof. If you have no basement or cellar, go to a small room (a bathroom or closet) on the lowest level of the structure, away from windows and as close to the center of the structure as possible.

Extreme Heat

Heat kills by pushing the human body beyond its limits. In extreme heat and high humidity, evaporation is slowed and the body must work extra hard to maintain a normal temperature.

Most heat disorders occur because the victim has been overexposed to heat or has over-exercised for his or her age and physical condition. Older adults, young children, and those who are sick or overweight are more likely to succumb to extreme heat.

The National Weather Service has developed two products that let the public know when excessive heat is occurring:

- Excessive Heat Warning: A warning is issued when a daytime heat index of 105 degrees Fahrenheit is expected to last more than three hours a day for two consecutive days or when the daytime heat index is expected to exceed 115 degrees Fahrenheit for any length of time.
- Heat Advisory: An advisory is issued when the daytime heat index is expected to reach 105 degrees Fahrenheit or above (but less than 115 degrees) for less than three hours and the nightly lows are expected to remain above 80 degrees for two consecutive days.

Before Extreme Heat

To prepare for extreme heat, you should:

- Install window air conditioners snugly; insulate if necessary.
- Check air-conditioning ducts for proper insulation.
- Install temporary window reflectors (for use between windows and drapes), such as aluminum foil-covered cardboard, to reflect heat back outside.
- Weather-strip doors and sills to keep cool air in.
- Cover windows that receive morning or afternoon sun with drapes, shades, awnings, or louvers. (Outdoor awnings or louvers can reduce the heat that enters a home by up to 80 percent.)
- Keep storm windows up all year.

During a Heat Emergency

The following are guidelines for what you should do if the weather is extremely hot:

- Stay indoors as much as possible and limit exposure to the sun.
- Stay on the lowest floor out of the sunshine if air conditioning is not available.
- Consider spending the warmest part of the day in public buildings such as libraries, schools, movie theaters, shopping malls, and other community facilities. Circulating air can cool the body by increasing the perspiration rate of evaporation.
- Eat well-balanced, light, and regular meals. Avoid using salt tablets unless directed to do so by a physician.
- Drink plenty of water. Persons who have epilepsy or heart, kidney, or liver disease; are on fluid-restricted diets; or have a problem with fluid retention should consult a doctor before increasing liquid intake.
- Limit intake of alcoholic beverages.
- Dress in loose-fitting, lightweight, and light-colored clothes that cover as much skin as possible.
- Protect face and head by wearing a wide-brimmed hat.
- Check on family, friends, and neighbors who do not have air conditioning and who spend much of their time alone.
- Never leave children or pets alone in closed vehicles.
- Avoid strenuous work during the warmest part of the day. Use a buddy system when working in extreme heat, and take frequent breaks.

Safety Tips for Motorists

Americans are world-famous for their long-term love affair with the automobile. In times of emergency, however, people often react incorrectly, either staying with or abandoning their cars at the wrong time. A mistake can be fatal.

After almost every disaster, search and rescue teams find victims who might have survived if they had known whether to stay with or leave their cars.

Following are safety tips for drivers in various types of emergencies. This information should be kept in the glove compartment of your car. In any situation, the most important rule is: **Don't Panic!**

Flood

Get Out of the Car

Never attempt to drive through water on a road. Water can be deeper than it appears and water levels can rise very quickly. Most cars will float for at least a short while. A car can be buoyed by floodwaters and then swept downstream during a flood. Floodwaters also can erode waterways and a missing section of road - even a missing bridge - will not be visible with water running over the area. Wade through floodwaters only if the water is not flowing rapidly and only in water no higher than the knees. If a car stalls in flood-water, get out quickly and move to higher ground. The floodwaters may still be rising and the car could be swept away at any moment.

Tornado

Get Out of the Car

A car is the least safe place to be during a tornado. When a warning is issued, do not try to leave the area by car. If you are in a car, leave it and find shelter in a building. If a tornado approaches and there are no safe structures nearby, lie flat in a ditch or other ground depression with your arms over your head.

Summer Heat

Stay Out of a Parked Car

During hot weather, heat build-up in a closed or nearly closed car can occur quickly and intensely. Children and pets can die from heat stroke in a matter of minutes when left in a closed car. **Never leave anyone in a parked car during periods of high summer heat.**

Developing Emergency

Stay Informed

In times of developing emergencies, stay tuned to a local radio station

Keep in the Car

Cars should be equipped with supplies which could be useful in any emergency. Depending on location, climate of the area, personal requirements and other variables, the supplies in the kit might include (but are not limited to) the following:

- blanket or sleeping bag
- booster cables and tools
- bottled water
- canned fruits and nuts
- can opener
- flashlight
- first-aid kit
- matches and candles
- necessary medication
- rain gear and extra clothes
- shovel
- traction mats or chains

Never carry gasoline in your vehicle unless it's in the car's gas tank!

Animals in Disasters

Disaster disrupts and affects everything in its path, including pets, livestock, and wildlife.

Pets in Disaster

Pets need to be included in your household disaster plan since they depend on you for their safety and well being. It is important to consider and prepare for your pets before disaster strikes.

Consider the following:

- With the exception of service animals, pets are not typically permitted in emergency shelters.
- Find out before a disaster which local hotels and motels allow pets and where pet boarding facilities are located. Be sure to include some outside your local area.
- Only some animal shelters will provide care for pets during emergency and disaster situations.
- Be sure your pet has proper identification tags securely fastened to the collar.
- Make sure you have a secure pet carrier or leash for your pet - they may need to be restrained during tense emergency situations.
- Assemble a disaster kit for your pet which includes food, water, medications, veterinary records, litter box, food dishes, and other supplies that may not be available at a later time, and an information sheet with pet's name, medical history, and behavior problems.

Large Animals in Disaster

If you have large animals, such as horses or cattle on your property, be sure to prepare before a disaster.

- Evacuate animals whenever possible. Map out primary and secondary routes in advance.
- Evacuation destinations should be stocked with, or ready to obtain, food, water, veterinary care, and handling equipment.
- Vehicles and trailers needed for transporting and supporting each type of animal should be available along with experienced handlers and drivers.

- In case evacuation is not possible, animal owners must decide whether to move large animals to shelter or turn them outside. This decision should be based on the disaster type, quality and location of shelter, and the risks of turning them outside.
- All animals should have some form of identification.

Animals After Disaster

Wild or stray domestic animals can pose a danger during or after many types of disasters. Remember, most animals are disoriented and displaced, too. Do not corner an animal.

If an animal bites you, seek immediate medical attention. Certain animals may carry rabies. Although the virus is rare, care should be taken to avoid contacts with stray animals and rodents.

Emergency Planning for Schools

In an effort to provide school leaders with more information about emergency preparedness, the U.S. Department of Education has developed a website - www.ed.gov/emergencyplan/ - designed to be a one-stop-shop to help school officials plan for any emergency, including natural disasters, violent incidents and terrorist acts.

Emergency Plans

If a school doesn't have a school crisis plan in partnership with public safety agencies, including law enforcement and fire, health, mental health, and local emergency preparedness agencies, it should develop one. Ensure that it addresses traditional crises and emergencies such as fires, school shootings, and accidents, as well as biological, radiological, chemical, and other terrorist activities. If a school does have a crisis plan, it should be reviewed. Train, practice, and drill. Documents on a shelf don't work in a crisis.

Ensure that the school district crisis plan addresses the unique circumstances and needs of the individual school. Districts are encouraged to develop a separate plan for each school building. Each school crisis plan should address four major areas - prevention/ mitigation, preparedness, response, and recovery.

Actions that schools should take under each of these areas include:

Prevention/Mitigation:

- Conduct an assessment of each school building. Identify those factors that put the building, students and staff at greater risk, such as proximity to rail tracks that regularly transport hazardous materials or facilities that produce highly toxic material or propane gas tanks and develop a plan for reducing the risk. This can include plans to evacuate students away from these areas in times of crisis and to reposition hazardous materials away from school buildings.
- Work with businesses and factories in close proximity to the school to ensure that the school's crisis plan is coordinated with their crisis plans.
- Ensure a process is in place for controlling access and egress to the school. Require all persons who do not have authority to be in the school to sign in.
- Review traffic patterns and where possible, keep cars, buses and trucks away from school buildings.
- Review landscaping and ensure buildings are not obscured by overgrowth of bushes or shrubs where contraband can be placed or persons can hide.

Preparedness:

- Have site plans for each school facility readily available and ensure they are shared with first responders and agencies responsible for emergency preparedness.
- Ensure there are multiple evacuation routes and rallying points. Your first or second evacuation site options may be blocked or unavailable at the time of the crisis.
- Practice responding to crisis on a regular basis.
- Ensure a process is established for communicating during a crisis.
- Inspect equipment to ensure it operates during crisis situations.
- Have a plan for discharging students. Remember that during a crisis many parents and guardians may not be able to get to the school to pick up their child. Make sure every student has a secondary contact person and contact information readily available.
- Have a plan for communicating information to parents and for quelling rumors. Cultivate relationships with the media ahead of time and identify a public information officer to communicate with the media and the community during a crisis.
- Work with law enforcement officials and emergency preparedness agencies on a strategy for sharing key parts of the school crisis plans.

Response:

- Develop a command structure for responding to a crisis. The roles and responsibilities for educators, law enforcement, fire officials and other first responders in responding to different types of crisis need to be developed, reviewed, and approved.

Recovery:

- Return to the business of teaching and learning as soon as possible.
- Identify and approve a team of credentialed mental health workers to provide mental health services to faculty and students after a crisis. Understand that recovery takes place over time.
- Ensure the team is adequately trained.
- The plan needs to include notification of parents on actions that the school intends to take to help students recover from the crisis.

Safety Activities

Get young people involved with emergency preparedness. Adapt ideas to fit your participants at school, at home or across the community. Customize activities to support preparedness for severe weather conditions or natural hazards most common in your area. The key to preparedness for an entire community is communication. Share ideas, information and activity outcomes with others.

Family Safety Check List
Use a check list to prepare for possible severe weather or natural disasters. Personalize your Family Safety Kit to include your special needs as well as local maps and community emergency phone numbers and information.

School Safety Check List
Take 10 minutes to list all the things you think you would need to survive at school for up to 72 hours without any outside assistance in case of severe weather emergency. Share your items with others to create a Classroom Emergency Kit list. Based on the class list and your own personal needs, bring items from home to prepare the kit. What items might be shared? What items must be multiplied times the number of people in the classroom?

Hazard Hunt
Identify dangerous situations and correct them.

At School: Form a "Hazard Hunt" committee to identify potential dangers in the classroom or other areas of the school. Look for tall, heavy furniture or breakable objects that could fall, flammable liquids that should be stored outside, dead tree branches or large overhanging limbs that could cause damage or desks that are too close to windows that might break. Prepare a list of recommended safety changes and present them to the authorities.

At Home: Look for items outside that might become deadly missiles in strong winds. Report on your "hunt" and the steps you took to correct each potentially dangerous situation.

Community Emergency Team
Invite a member of your community's Emergency Management team or other safety preparedness officials to talk about community efforts in disaster preparedness. Demonstrate your home and/or school preparedness plans for an official critique.

Route and Re-Route
Locate designated emergency shelters and evacuation routes on a local map. Then, work with a team to prepare simulated "emergency announcements" that could affect specific local road and bridge safety. Challenge other teams to map new evacuation routes that would avoid the dangers and get them safely to a designated shelter.

Drill and Practice
Perform and evaluate FAMILY and SCHOOL SAFETY drills for a possible emergency in your area. Set up a "grading" system based on speed and accuracy in demonstrating necessary precautions.

Fact or Fiction?
Find interesting facts, myths, or your own weather "fiction" to challenge your friends and test their severe weather knowledge. How can understanding the facts help us prepare for severe weather? For example, "You should open your windows during a tornado warning". FALSE- valuable time is lost getting yourself to safety.

Primary Preparation
Develop skits, choral readings, video productions, puppet shows, puzzles, etc. to help younger students understand preparedness. Keep the information clear and entertaining. Remember, it's important for young children to understand what to do in an emergency, but not to be afraid of the possible situations.

Step Carefully
Whether returning home after an evacuation or stepping out of a shelter after a tornado you have to learn to step carefully to avoid hidden dangers. Create a simulated disaster scene, using over-turned furniture and desks, piles of books, heaps of coats and sweaters, strewn toys, pencils and rulers and torn pieces of paper to simulate broken glass. The challenge is to make it through the area without climbing over or on anything that could fall or stepping on any "fallen power lines" or "broken glass." What kinds of real obstacles might you encounter in a real disaster? In what ways could you further protect yourself from these hazards as you step out?

NOAA Weather Radio

Newspaper, radio, and television are all good sources of weather data. However, if you want the most accurate and timely information, go to the source itself. You can listen to a weather radio designed to pick up broadcasts of the National Oceanic and Atmospheric Administration (NOAA).

NOAA Weather Radio (NWR) provides continuous broadcasts of the latest weather information directly from the National Weather Service offices and these broadcasts are tailored for your specific area. A number of commercial manufacturers offer weather radios designed specifically for receiving NOAA's high frequency transmissions. NOAA Weather Radio broadcasts can usually be heard as far as 40 miles from the transmission site. The broadcast range depends upon a number of factors including signal strength, terrain, quality of your weather radio, and current weather conditions. A coverage map can be found at http://www.nws.noaa.gov/nwr/states/sdakota.html.

With the implementation of the Emergency Alert System (EAS) and Specific Area Message Encoding (SAME), it is now possible to program certain weather radios to sound an alert for only the counties desired in a specific NWR's broadcast area. The owner of a NWR with SAME technology can program the desired county into the radio. The radio will then only alert the listener to weather emergencies in the programmed counties. Older NWR receivers without SAME capability alert listeners of emergencies anywhere within the coverage area of the NWR transmitter. You can find out more information about SAME Technology or EAS Broadcasts from the National Weather Service (NWS) at http://www.nws.noaa.gov/nwr/nwrsame.htm.

Under a January 1975 White House policy statement, NOAA Weather Radio was designated the sole government-operated radio system to provide direct warning into private homes for both natural disasters and nuclear attack. This concept has been expanded to include warnings for all hazardous conditions that pose a threat to life and safety, both at a local and national level.

Severe/Hazardous Weather Terms

Warning - A product issued by National Weather Service (NWS) local offices indicating that a particular weather hazard is either imminent or occurring. A warning indicates the need to take action to protect life. Typical warnings include:

- Tornado Warning
- Severe Thunderstorm Warning
- Flash Flood/Flood Warning
- Excessive Heat Warning

Watch - A NWS product indicating that conditions are favorable for the development of a particular severe weather event. A watch is normally issued for several hours and indicates a need for planning, preparation and an increased awareness of changing weather conditions. Typical watches include:

- Tornado Watch
- Severe Thunderstorm Watch
- Flood Watch

Cold Air Funnels - A funnel cloud or rarely a small relatively week tornado that can develop from a small shower or thunderstorm when the air aloft is unusually cold. Much less violent than other types of tornadoes.

Downburst - Intense gust of wind or downdraft that exits the base of a thunderstorm and spreads out horizontally at the earth's surface as a strong wind which often causes damage.

Flash Flood - A flood that can occur very rapidly. Flash floods occur as the result of very heavy rainfall in a short period of time, generally over a relatively small area.

Flood - The condition that occurs when water overflows the natural or artificial confines of a stream or body of water or accumulates by drainage over low lying areas.

Funnel Cloud - Violently rotating column of air that is not in contact with the ground. A tornado passes through the funnel cloud state during its development and dissipation.

Gust Front - The leading edge of a mass of cool gusty air that flows from the base of a thunderstorm and spreads along the ground in advance of the thunderstorm.

Lightning - Generally, any and all of the various forms of electrical discharge produced by thunderstorms.

Severe Thunderstorm - A thunderstorm producing a tornado, damaging winds of 58 mph or higher and/or hail 3/4" in diameter or larger.

Straight Line Winds - Thunderstorm winds that may produce damage which typically exhibits a lack of a rotational damage pattern. Straight line winds are most often produced by a thunderstorm gust front originating from a downburst.

Thunderstorm - In general, a local storm produced by a cumulonimbus cloud and accompanied by lightning and thunder, usually with strong wind gusts, heavy rain and sometimes hail.

Tornado - Violently rotating column of air in contact with the ground, descending from the base of a severe thunderstorm. They are usually funnel-shaped, with a narrow end nearest the ground.

Internet Resources

http://www.breadysd.com/

The South Dakota bReady campaign encourages individuals to have an emergency bReady kit, make a family emergency plan and learn more about the different threats that may affect them from natural disasters to epidemics.

http://www.redcross.org/services/disaster/eduinfo/

The American Red Cross has many materials available for teachers, educators, and presenters to use to help children and families learn how to stay safe and prevent or reduce the effects of disasters or other emergencies.

http://www.fema.gov/plan/index.shtm

While most disasters cannot be avoided, the Federal Emergency Management Agency provides information on things people can do to lessen the loss of life and property damage.

http://www.disasterhelp.gov/

DisasterHelp provides responders, emergency managers and homeland security advisors an online capability to collaborate with other members of the Disaster Management community. It is also a source of general information for citizens.

http://www.ready.gov/

The U.S. Department of Homeland Security has developed a website to assist citizens in learning about potential threats so that they are better prepared.

http://www.sddot.com/travinfo_weather.asp

This page includes links to assist South Dakota travelers.

http://www.ed.gov/emergencyplan/

The website is designed to be a one-stop shop that provides school leaders with information they need to plan for any emergency, including natural disasters, violent incidents and terrorist acts.

http://www.dhs.gov/xcitizens/

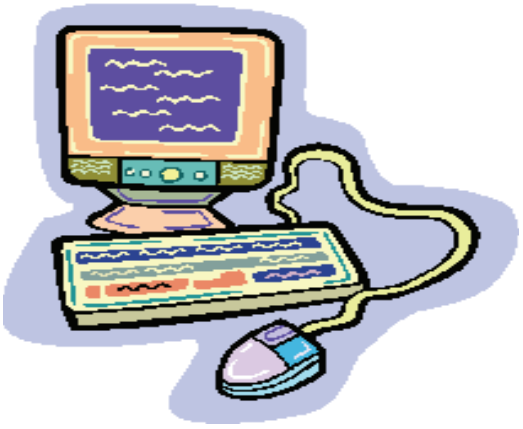
Educating America's families on how best to prepare their homes for a disaster and tips for citizens on how to respond in a crisis is a mission of the U.S. Department of Homeland Security.

http://www.nws.noaa.gov

The National Weather Service (NWS) provides weather, forecasts, and warnings for the entire United States.

http://www.weather.gov/os/edures.shtml

This page contains links to National Oceanic Atmospheric Administration web sites that contain information about weather education.



County Emergency Managers' Contact Numbers

Aurora 605-942-7595	Fall River 605-745-7562	McPherson 605-439-3331
Beadle 605-353-8421	Faulk 605-598-6222	Meade 605-347-4222
Bennett 605-685-6541	Grant 605-432-1489	Mellette 605-259-3371
Bon Homme 605-589-4242	Gregory 605-775-2626	Miner 605-772-4533
Brookings 605-692-5212	Haakon 605-567-3515	Minnehaha 605-367-4290
Brown 605-626-7122	Hamlin 605-783-7831	Moody 605-997-3251
Brule 605-234-3433	Hand 605-853-2408	Pennington 605-394-2185
Buffalo 605-293-3231	Hanson 605-239-4218/4423	Perkins 605-244-5243
Butte 605-723-0900	Harding 605-375-3313	Potter 605-765-2387
Campbell 605-955-3598	Hughes 605-773-7454	Roberts 605-698-3905
Charles Mix 605-487-7845	Hutchinson 605-770-7927	Sanborn 605-796-4511
Clark 605-532-5891	Hyde 605-852-2595	Shannon 605-745-7562
Clay 605-677-7185	Jackson 605-837-2333	Spink 605-472-4591
Codington 605-882-6272	Jerauld 605-539-0243	Stanley 605-773-7454
Corson 605-273-4210	Jones 605-669-7111	Sully 605-258-2244
Custer 605-673-8128	Kingsbury 605-854-3711	Todd 605-747-2535
Davison 605-995-8640	Lake 605-256-7611	Tripp 605-842-2300
Day 605-345-3222	Lawrence 605-578-2122	Turner 605-297-6000
Deuel 605-874-8189	Lincoln 605-764-5746	Union 605-356-2351
Dewey 605-865-3505	Lyman 605-869-2266	Walworth 605-845-2800
Douglas 605-779-5761	Marshall 605-448-2339	Yankton 605-668-5289
Edmunds 605-287-4394	McCook 605-425-2085	Ziebach 605-365-5129

Tribal Emergency Managers' Contact Numbers

Cheyenne River Sioux Tribe
..... 605-964-6685

Crow Creek Sioux Tribe
..... 605-245-2779

Lower Brule Sioux Tribe
..... 605-473-5532

Oglala Sioux Tribe
..... 605-867-8120

Rosebud Sioux Tribe
..... 605-747-2559

Santee Sioux Tribe
.....605-997-3891

Sisseton Wahpeton Oyate
..... 605-698-3911 Ext. 206

Standing Rock Sioux Tribe
.....701-854-7461

Yankton Sioux Tribe
.....605-487-7192

Public Safety Building
118 West Capitol Avenue
Pierre, SD 57501

Phone: 605.773.3231
Fax: 605.773.3580

SOUTH DAKOTA OFFICE OF EMERGENCY MANAGEMENT

We're on the Web: www.oem.sd.gov

The information contained in this newsletter was compiled by various agencies concerned with the safety of South Dakota citizens. The Federal Emergency Management Agency, the American Red Cross and the National Weather Service helped make the 2008 South Dakota Severe Weather Preparedness Guide possible.

Portable Electric Generators

Portable electric generators are a good source of power for heat, light, refrigeration and cooking during electrical outages. But, if generators are improperly installed or operated, they can become deadly. Safety awareness can prevent needless deaths:

- Never operate the generator in enclosed or partially enclosed spaces, including homes, garages and basements. Generators produce high levels of carbon monoxide very quickly, a colorless, odorless, deadly gas.
- Keep the generator dry. To protect it from moisture, operate on a dry surface under an open canopy-like structure.
- Plug appliances directly into the generator. Or, use a heavy-duty outdoor-rated extension cord that is rated in watts or amps at least equal to the sum of the connected appliance loads.
- Do not connect your generator directly to your household wiring, as this can backfeed along the power lines and electrocute anyone coming in contact with them, including lineworkers making repairs. Connecting a generator to the main electrical supply for your house requires the services of a qualified licensed electrician.
- Make sure the generator is properly grounded.
- Do not overload the generator. A portable generator should be used only when necessary and only to power essential equipment or appliances.
- Make sure fuel for the generator is stored safely, away from living areas, in properly labeled containers and away from fuel-burning appliances.
- Turn off all appliances powered by the generator before shutting down the generator.